Gouldia melanosternon.

Crown of the head, neck, and breast glittering yellowish green, the feathers of the lower part of the neck very obscurely edged with coppery brown; chest jet-black, on each side of which the feathers are light brownish grey, separating the black of the chest from the green of the flanks; under tail-coverts brown and grey; back, rump, and upper tail-coverts bronzy green, interrupted by a band of white across the rump; tail long and deeply forked, the feathers almost filamentous, the outer one on each side grey, the remainder steel-blue with white shafts; bill and wings black.

Total length $4\frac{7}{8}$ inches, bill $\frac{3}{4}$, wing $1\frac{5}{16}$, outer tail-feathers $2\frac{3}{4}$.
Hab. Peru.

Remark.—Very closely allied to *Gouldia Langsdorffi*, but differs in being a trifle smaller, and in the almost total absence of the band across the chest, which forms a conspicuous and beautiful feature in that bird. I have numerous examples of both sexes of this new species now before me, among which are three males, one from the Napo, another from Pebas, and a third from, I believe, the neighbourhood of Ucayali (Bartlett, No. 1619). The habitat of *G. Langsdorffi* is, as every one knows, the neighbourhood of Rio de Janeiro, in Brazil.

XLI.—*List of Coleoptera received from Old Calabar, on the West Coast of Africa.* By ANDREW MURRAY, F.L.S.

[Continued from ser. 3. vol. xx. p. 323.]

[Plate IX.]

Lycidæ.

LYCUS, Fab.

§ 1. Males with elytra expanded, and shoulders prominent but not spined. Females comparatively narrow.

1. *Lycus foliaceus*, Schön. Syn. Ins. iv. App. p. 26, pl. 5. f. 4, ♂. Pl. IX. fig. 1.

Lycus oblitus, Dej. Cat. 110, ♂.

There are three types of the male of one of the forms of this section of Lycidæ, which I separate with hesitation and doubt, the more so that I have been unable to find corresponding females for them. Still there are sufficient differences to warrant their being recorded as distinct varieties; and those who do not think the differences specific will suffer little inconvenience in having to rank them merely as known and marked varieties.

The first is that figured and described by Schönherr, under the name of *foliaceus*. It is the *oblitus* of Dejean; and the male is easily recognized from those of the allied species by its large size and the great degree of expansion and inflation of the elytra, and by the apical black mark on the elytra not extending across in nearly a straight line in front, but protruding forwards in three more or less curved, ill-defined breaks in each, the outer black mark being marginal and reaching further forward than the two inner ones, as shown in Pl. IX. fig. 1, which represents the male. The suture is concave towards the apex of the elytra, and the sutural angle ends in an incurved sharp point, as shown in fig. 1, *b*.

In none of the Lycidæ of this group is much attention to be paid to the colour of the underside of the body or of the limbs or basal articles of the antennæ. In this species the underside is yellow, and the legs black; but in some the body is brown; and in others the femora are yellowish,—considerable variation occurring in the depth and intensity of the colour.

This species is usually considered the same as the next; but I have found the above characters pretty constant, although in the colouring there are undoubtedly indications of transition between them, inasmuch as the anterior line of the black apical patch in the next species shows sometimes breaks which, if continued, would produce that of this species; but I have never been able to find a regular uninterrupted series of gradations between the two.

One argument in favour of their being distinct is that I have only received some half dozen specimens of this species, and these all in one *envoi*, whereas in all the other collections sent the following species has been numerous.

2. *Lycus immersus*. Pl. IX. figs. 2 (♀) & 3 (♂).

Lycus xanthomelas, Schön. Syn. Ins. iv. App. 26, pl. 5. fig. 5, ♀.

Niger, supra flavus, elytris postice nigris. *L. foliaceo* similis, sed minor. ♂. Elytris minus inflatis, macula apicali nigra majore cum margine anteriore fere recto.

♂. Long. 6–9 lin., lat. 5–7 lin. ♀. Long. 5½–8 lin., lat. 2–3 lin.

Smaller than *L. foliaceus*, differing in the form of the black apical marking on the elytra, it being nearly straight in front, or only extending very slightly further along the margin than in the middle. The inflation of the elytra differs also a little in shape, being broadest a little behind the middle, while in *L. foliaceus* the expansion is nearly oblong oval, and widest in the middle. The termination of the sutural angle is different, being sinuate, as shown in fig. 3 *b*, instead of incurved as in

L. foliaceus, or straight as in *L. semiamplexus*, or rounded incurved as in *L. dentipes*.

The female specimens seem most of them to correspond with this in size, and came along with them and in equal numbers; therefore I have presumed them to be the female of this, rather than of the typical *L. foliaceus*. Fig. 2 represents one of these females. They are the *L. xanthomelas* of Schönherr.

3. *Lycus aspidatus.* Pl. IX. figs. 4 & 5.

Niger, supra flavus, elytris postice nigris. *L. immerso* affinis. ♂. Elytris umbone dorsali prominente, dimidio posteriore nigro, et sutura apice incurvata dignoscitur. ♀ ignota.

♂. Long. 7½ lin., lat. 5¾ lin.

Allied to *L. immersus*. Elytra in the male distinguished by a prominent dorsal umbo. The apical black patch extends over fully the half of the elytra, and embraces the umbo. The suture is incurved and slightly sinuate at the apex, and has the angle blunt.

Only one specimen was received.

4. *Lycus semiamplexus.* Pl. IX. fig. 6.

Niger, supra flavus, elytris margine posteriore nigro. *L. immerso* minor, textura læviore; ♂ macula apicali nigra marginem posteriorem elytrorum amplectente et super suturam breviter ascendente, sutura angulis apicalibus rectis.

♂. Long. 5½–6½ lin., lat. 4–4½ lin. ♀? Long. 6 lin., lat. 2¼ lin.

♂. Still smaller than *L. immersus*, and very constant in size; rounder behind than it. The reticulations are finer, smaller, and the texture rather closer; and the form of the black apical mark on the elytra is different, extending in a well-defined narrow band more than halfway along the outer margin, and also encroaching in an oblong patch on the suture, as shown in Pl. IX. fig. 6; in other respects the colouring is the same. The suture is straight, and its angle right-angled and a little rounded or blunt at the point (fig. 6).

I have no doubt that this is distinct from any of the preceding; the size, distribution of colour, straightness of the suture, and fineness of texture are very constant. I have, however, no certainty about the female.

5. *Lycus dentipes*, Schön. Syn. Ins. iv. App. p. 25.
Pl. IX. figs. 7, 7*a*, & 7 *b*.

Lycus Bremei, Bohem. Ins. Caffr. i. p. 427 (haud Guér. Lefebvre, Voy. en Abyss. pl. 3. figs. 7–9, et Rev. Zool. 1847, p. 223).

Niger, supra flavus; thoracis disco (medio et postice), scutello, humeris elevatis totis elytrorumque apice irregulariter nigris; abdomine lateribus late flavis.

♂. Elytris amplissimis, conjunctim fere orbiculatis, humeris oblique valde elevatis, femoribus tibiisque quatuor posterioribus dentatis. Long. 10–14 lin., lat. 8–10 lin.

♀. Elytris subparallelis; costa humerali rotundatim et horizontaliter extensa; pedibus muticis. Long. 10–14 lin.

There is no doubt that this is the species described by Boheman as the *Bremei* of Guérin. But he cannot have seen the original figure of that species given by Guérin in Lefebvre's 'Voyage en Abyssinie,' which is quite different from it, and much nearer *L. foliaceus*, or rather that form of it (whether species or variety) which I have above characterized as *L. immersus*. The reference which Boheman gives is to Guérin's separate description in the 'Revue Zoologique,' where there is no plate; but a figure of it is given in Lefebvre's 'Voyage,' of which the entomological part is by Guérin-Méneville. To remove all doubt from the subject, I figure both. Figs. 12, 13, and 14 (see *L. Bremei* posteà) are taken from the plates in Lefebvre's 'Voyage,' and represent Guérin's *Bremei*. Fig. 7 represents Boheman's *Bremei*.

But although the latter is quite distinct, it is not new. Schönherr had previously described it under the name of *L. dentipes*, as may be seen from his description, which is as follows:—

"Niger, thoracis lateribus elytrisque latissimis flavis; his macula basali apiceque nigris; femoribus posterioribus dentatis.

"Habitat in Cap. Bon. Spei. Mus. Schönh.

"Perhaps only the male of *L. rostratus*; the size of the body and the facies nearly as in it, viz. the disk of the thorax almost entirely black, the elytra with a large basal patch at the scutellum, and the apex sinuately black; to be sure, it is larger, and chiefly in the elytra almost twice as broad, competing with *L. foliaceus* in magnitude. The elytra behind the middle very much dilated, with the lateral margin reflexed. The shoulders very much raised, inflated; the suture not infuscate. The body below black; the abdomen with the sides luteous. Legs strong and black; the posterior thighs armed below with a strong subobtuse tooth. The wings pale, with the apex black."

The above, with one exception, is a perfect description of the present species: the exception is, "the elytra behind the middle very much ditated" (elytris pone medium valde dilatatis). It is true that they are very much dilated behind the middle, but so are they before the middle; and if the meaning were "very much dilated, most so behind the middle," then it would be correct; but I rather incline to treat this as an inaccurate turn of expression. There is no African *Lycus* that I know of, except this, which has any of the thighs toothed.

A single male of this species is all that I have seen from Old Calabar. Boheman's description was made from specimens taken by Wahlberg near the River Limpopo; so that we have here the same species apparently ranging across the whole continent. The Abyssinian habitat, resting on its being the species described by Guérin, must be cancelled.

6. *Lycus subcostatus.* Pl. IX. fig. 8.

♀. Niger, supra flavus; thoracis disco, scutello elytrorumque apice nigris, lateribus abdominis flavis vel piceis; elytris sublinearibus, quadricostatis, costa secunda et quarta magis quam ceteris elevatis, humeris horizontaliter costatis.

Long. 5½ lin., lat. 2½ lin.

♂ ignotus.

Similar in appearance to the female of *L. immersus* or *foliaceus*, but with the following differences:—the disk of the thorax black; the elytra with four costæ slightly raised, the second raised a good deal more than the rest, and the fourth next in degree; the shoulders slightly expanded, not tumid, but flat, and with the margin costate; the black apex of the elytra narrowest at the suture. The antennæ are broader than in *L. foliaceus*, and with a tendency to flabellation. Male unknown.

Only one specimen received.

7. *Lycus scapularis.* Pl. IX. fig. 9.

L. palliato affinis et similariter coloratus; elytris longioribus, humeris parum minus inflatis; subtus fuscescens et abdomine testaceo.

Long. 8 lin., lat. 3¼ lin.

Closely allied to *L. palliatus* of Fabricius and to *L. palliolatus* of Schönherr, which are probably, as the latter divined, male and female of the same species. This is still longer and proportionally narrower than either, and has the underside fuscescent, except the abdomen, which is testaceous instead of black; the shoulders are more restricted in their inflation; the apex of the abdomen is dark. It is doubtless the Old-Calabar representative of that Senegalese species.

Only one specimen received.

8. *Lycus Bremei*, Guér. in Lefebvre, Voy. en Abyss. Zool. p. 287. Pl. IX. figs. 10–14.

Lycus dissimilis, Bertoloni, Illust. Rer. Nat. Mozamb. 35, pl. 2. fig. 5, and Comment. Acad. Bonon. 1849, x. 413.

♀. *L. immerso* (♀) similis, minor, angustior; thorace magis elongato, disco fusco vel nigro; elytris magis parallelis, humeris vix prominentibus.

Long. 4½ lin., lat. 1¾ lin.

♀. Like a small female of *Lycus immersus*, and not unlike a small specimen of *L. sinuatus*, only the elytra not so rapidly attenuated behind. The thorax, however, is more elongate, being somewhat gable-shaped; the posterior angles do not project laterally so much, and the disk is piceous or black. The antennæ have a greater tendency to flabellation. The scutellum is piceous or black; the elytra narrower, without humeral projections, and with a coarser reticulation; the apex more attenuated.

In a paper by Bertoloni, entitled "Illustratio rerum Naturalium Mozambici," published in 1849 in the Comment. Acad. Bonon. x. p. 413, there is a species of *Lycus* described and figured under the name of *L. dissimilis*, the female of which agrees with the specimen from which I have taken the above description; but on comparing Bertoloni's figures and description with Guérin's of *Bremei*, which I have here copied (Pl. IX. figs. 12 & 13 from Guérin, and fig. 14 from Bertoloni), it seems to me that the two are the same. Guérin's publication being the prior, his name must stand.

It will be seen, from the above figures, that the form of the expansion of the elytra in the male of Guérin's figure is different from that of *immersus*.

I have only received one specimen of this; and it being a female, and somewhat immature, and the females of the allied species of this group being so like each other, I should wish the reader to receive my determination of *L. Bremei* as an inhabitant of Old Calabar with a point of doubt, and as requiring confirmation.

9. *Lycus pyriformis*. Pl. IX. fig. 15.

Subpyriformis, niger, thorace et elytris supra flavis; thorace medio, scutello et elytris regione scutellari et apice interne

sinuatim nigris, his rugoso reticulatis, quadricostatis, costa humerali parum elevata, lateribus parum reflexis.
Long. 5–6 lin., lat. 4 lin.

Subpyriform in outline, black; antennæ rather stout and with the articles rather short. The thorax is rounded in front, with a black longitudinal band (widest behind) up the middle; the scutellum black. The elytra flat, except at the shoulders; the scutellar region black; the shoulders slightly raised into a narrow sharp ridge, up to which the black comes, but does not touch it; there is a broad black band along the apex and posterior half of the elytra; the margins are sharply reflexed; there are four costæ, which are most pronounced at the base, almost disappearing at the apex. Abdomen black, with the sides broadly yellow. The pyriform outline, the thorax nearly rounded in front, the elytra flat, the scutellar space black, and the margins of the elytra reflexed are the most important characters of this species.

I have received specimens of this from the Cape, under the name of *L. rostratus*, Fab. If, however, the *Lycus rostratus* of Fabricius is the same as the *Lycus rostratus* of Linnæus (which I presume it is), then my specimens have been incorrectly named; for they are certainly distinct from the figure and description of *L. rostratus* of Linnæus (*Lampyris rostrata* Linnæi) given by Wulfen, in 1786, in his 'Descriptiones quorumdam Capensium Insectorum,' of which fig. 16 is a copy. The truth seems to be that the name has been bandied about, by the earlier authors, among any of the African species which had the scutellar region black. There are not many of them. Schönherr supposes *dentipes* to be the female of it, in which I do not agree. The texture is different, that of *dentipes* being somewhat shining, that of the present species dull and pubescent.

10. *Lycus ustus.* Pl. IX. fig. 17.

Niger, thorace lateribus et elytris, exceptis regione scutellari et marginibus exterioribus posticis, flavis.
Long. 6 lin., lat. 3 lin.

Rather narrow, black below, above orange-yellow, with a broad stripe down the middle of the thorax, the scutellum, the scutellar region, and the exterior margin of the posterior half of the elytra black; not so peaked behind as *L. sinuatus*, nor so pubescent.

Not unlike *L. pyriformis*; but, besides differing in shape and colouring, the elytra are not so flat, and have not the margins reflexed.

One specimen; probably a female.

§ 2. Males with a projecting blade on the shoulder terminating in a spine. Females narrower, and with the projecting blade rounded off and without a spine. (See Pl. IX. figs. 18 & 18a.)

11. ♂. *Lycus præmorsus*, Schön. Syn. Ins. App. p. 25, pl. 5. fig. 1; Westwood, Introd. to Entomol. i. p. 254, fig. 27 (6).

♀. *Lycus latissimus*, Schön. *ibid.* fig. 3.

Var. *L. harpago*, Thomson, Arch. Ent. ii. 76; Lacord. Genera Col. pl. 45. fig. 3.

I know of at least four varieties of *Lycus præmorsus*.

Var. *α. præmorsus* (type). The typical form, figured by Schönherr and Westwood, in which there is no median black band across the elytra, but merely two marginal spots and the apical one. This variety has the emargination of the apex of the elytra very distinct. The underside is said by Schönherr to be black.

This I have not received from Old Calabar.

Var. *β. harpago*. The *Lycus harpago* of Thomson, which appears to be only a variety of *præmorsus*. He says it is very nearly allied to it, but differs by its size being greater, by its elytra being more strongly dilated, by the median band being complete, by the truncature not being so strongly spined, and by its yellow abdomen. Now, as to its size, the difference is too slight to allow that alone to be reckoned as a distinctive character; and I have specimens agreeing in all other respects with the characters of *L. harpago*, but no larger than Schönherr's typical *præmorsus*. Indeed the only difference between one of the Old-Calabar varieties of *præmorsus* and the figure of *harpago* in Lacordaire's 'Genera des Coleoptères' is that it is somewhat smaller. Next, as to the elytra being more dilated, this is the case in my own larger specimens, but not in the smaller. It is a character, or perhaps a *deceptio visus*, arising from the increased dimensions. The median band, although styled by Thomson complete, is not complete in Lacordaire's figure, but only interruptedly complete, the two large, broad median marginal patches being only semiunited by a much narrower, black, irregular line, of diverse thickness, interrupted in two parts. I have specimens, both male and female, with the band exactly so interrupted, and others not interrupted at all, others without the uniting line at all, and another with about the whole of the latter half of the elytra invaded by black. This extension of the black colour across the elytra cannot, therefore, be regarded as a character of much importance. The truncature of the apex of the elytra being more feebly emarginate is also a small character; and I should scarcely like to say that in my specimens it was more feebly emarginate; in the next variety it certainly is. The last distinguishing character is that Schönherr describes the underside as black, while Thomson's *harpago* is yellow, except the terminal segment of the abdomen. This difference is, I suspect, not one in the insects themselves, but due to the process of drying. My reason for suspecting this is that the underside, on a slight examination, appears to be yellowish in many of my specimens, piceous yellow in some, and black in others; but, on a more careful examination, I can see a yellowish tinge shining through both the brown and the black; so that there is little doubt that they have all been more or less yellow in life, and have acquired the darker hue either from having been in spirits before being dried, or through the process of drying itself.

This variety occurs at Old Calabar.

Var. γ. *subdenticulatus.* A variety still larger than any of my specimens of *harpago*, in fact almost as large as the figure of it given by Lacordaire, but with the band wholly interrupted, exactly as in the typical *præmorsus.* It has, however, the apical truncature much less emarginate; and the little tooth at each corner of the emargination in *præmorsus* is here almost entirely absent, particularly at the external angle. In this respect and in their size my specimens would agree better than the preceding banded variety with *harpago*; but this only seems to furnish additional proof that they are all varieties of one species.

This variety also occurs at Old Calabar.

Var. δ. *fenestratus.* In this variety the apical and median black bands have coalesced, leaving only a small spot or two of yellow surrounded with black.

This is a variety of which I have a single female from Old Calabar.

Many specimens have been received of the variety which I have called *subdenticulatus*; only a few of the variety with a median band.

12. *Lycus Æolus.* Pl. IX. fig. 19.

Capite nigro, thorace subtus nigro, supra aurantiaco, disco longitudinaliter nigricante; metasterno nigro, postice flavescente; abdomine flavo, medio fuscescente, apice piceo-nigro; elytris aurantiacis, apice et lateribus posticis nigris, humeris breviter armatis, lateribus expansis tumidis; antennis pedibusque nigris.

Long. 8 lin., lat. 6 lin.

The head black; the thorax above orange-coloured, with the disk brownish black, and beneath black; the scutellum dark, and the elytra bright orange-coloured, with the apex and posterior margins broadly black; the metasternum black, with a yellowish space in front of the trochanters of each of the hind legs; the antennæ, parts of the mouth, wings, and legs black. Antennæ moderate. Thorax with the sides broad, and the middle space in front projecting triangularly over the head; anterior angles rounded, posterior slightly acute. Elytra with the humeral blade short and flat, the spine or point in the male short, and its angle obtuse and only slightly curved; two strong costæ run down in the space between it and the suture; and on the outer side the elytra expand, leaving a defined line marking the point of the expansion; and this expansion is anteriorly swollen, like the cheeks of Æolus (whence I have derived its name), broadest before the middle, sloping obliquely backwards; and the black apical margin is as broad as this swollen portion. In the male the suture is incurved in its posterior half, and the apex of each elytron is truncate obliquely and with a slight curve inwards, the outer angle rounded, and the sutural angle is nearly right-angled. From the analogy of the next species, *L. elegans*, which is nearly allied to it, I presume that the apex of the elytra in the female is rounded to the suture, and not truncate, and that the suture is straight in the female.

A very handsome species, the rich orange-colour and deep black making a fine contrast.

Rare. I have only received two males; but I have seen one or two others, from the west coast of Africa, in the British Museum and other collections.

13. *Lycus elegans.* Pl. IX. fig. 20.

L. Æolo affinis, sat similiter coloratus, sed elytrorum lateribus postice angustius nigro notatis et elytris magis elongatis et lateribus minus tumidis.

♂. Long. 8–9 lin., lat. 5½ lin. ♀. Long. 10–11 lin., lat. 5 lin.

Allied to *L. Æolus*; but the black margin near the apex is much narrower, and cannot be said to extend along the apex; for its inner side starts from the sutural angle, and from that part it runs parallel to the outer margin for nearly the half of the elytra (less in the female than the male); the colouring in other respects is nearly the same, except that the metasternum is wholly black, and the abdomen all yellow, except the last segment. In shape, however, and general appearance it differs more materially. It is a larger, longer, and more elegantly proportioned insect. The thorax is more transverse and squarer, and the triangular projection of the middle over the head is not so great and is wider; the posterior angles are rounded at the points and channelled. The elytra are widest about the middle, and slope more gently both backwards and forwards; the swollen lateral expansion is longer, narrower, and not so tumid; the humeral blade is longer; the suture in the male is curved concavely behind the middle, and the apex truncate obliquely, terminating at the sutural angle in a sharp little yellow tooth; in the female the suture is straight, and the apex rounded ovately; tibiæ simple.

This I think the handsomest of the West-African Lycidæ. It is apparently rather rare, not many specimens having reached me.

§ 3. Elongate, attenuate at the apex; the elytra in neither sex expanded nor armed with blades or spines on the shoulders.

14. *Lycus sinuatus*, Schön. Syn. Ins. iv. App. p. 28. Pl. IX. fig. 21.

Of this I received several specimens, divisible into two groups, one larger than the other, and with longer and proportionately more slender antennæ: they were, doubtless, the sexes, the one with longer antennæ probably the male. The abdomen in some is black, but in most is slightly margined with yellow; and the median black stripe on the thorax is broader in some than in others.

[To be continued.]

XLII.—*On* Ellipsoidina, *a new Genus of Foraminifera*[*]. By Giuseppe Seguenza, Professor of Natural History in the Royal Lyceum, Messina. *With further Notes on its Structure and Affinities*, by Henry B. Brady, F.L.S., F.G.S.

[Plate XIII.]

[A portion of the following translation was prepared some years ago; but the difficulty of accepting the author's conclusions, without some modification which there was then no means of verifying, caused it to be laid aside. Quite recently I have received from Professor Seguenza a number of specimens, the careful examination of which has led to results differing in one or two important particulars from those detailed in his paper,

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[*] From the 'Eco Peloritano, Giornale di Scienze, Lettere ed Arti,' Anno v. serie 2^a. fasc. 9.